

REMARKS/ARGUMENTS

The Examiner is thanked for granting an interview on November 17, 2004. As was discussed during the interview, the Applicant has amended the independent claim 7 to additionally recite the features recited in claims 9 and 10. Accordingly, it is respectfully submitted that these claims are now in condition for early allowance. The Examiner's rejection is fully traversed below.

Claims 1-3, 9-10 have been cancelled. Claims 4-5, 8, 14-19 have been amended. New Claims 20-22 recite similar features as recited in claim 7 and its dependent claims. Claims 4-8, 11-22 are pending.

Proposed drawings for Figure 1A and 1B which correct the problems noted by the Examiner are hereby submitted herewith for the Examiner's approval.

The Examiner stated that the trademark JAVA should be capitalized wherever it appears and be accompanied by the generic terminology. The specification has been amended accordingly.

The Examiner objected to Claims 9 and 15 because of informalities. Claim 15 has been amended according to Examiner's suggestion and as recited above. Claim 9 has been cancelled, and the limitation of Claim 9 has been amended according to Examiner's suggestion and incorporated into independent Claim 8, as recited above.

The Examiner rejected Claims 4 and 8 under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter, and stated that a simple amendment will overcome this rejection. According to Examiner's suggestion, Claims 4 and 8 have been amended as recited above to refer to a computing apparatus.

The Examiner rejected Claim 6 under 35 U.S.C. § 112, first paragraph, as failing to

comply with the written description requirement. According to Examiner's suggestion, Claim 6 has been amended to state "pop a reference to said Java object" instead of "pop a reference to said Java Bytecode instruction", as recited above.

The Examiner rejected Claims 10 and 11 as having insufficient antecedent basis. Accordingly, Claim 10 has been incorporated into the currently amended Claim 8. Claim 11 now depends directly from the currently amended Claim 8 and overcomes the insufficient antecedent rejection.

The Examiner rejected Claim 14 as having insufficient antecedent basis for the phrase "said Java computing environment". Claim 14 is amended for clarification, replacing the phrase with "a Java computing environment" as recited above. Applicant respectfully submits that as a result claim 14 overcomes the insufficient antecedent rejection.

The Examiner rejected Claim 17 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 17 has been amended according to Examiner's suggestion and as recited above.

The Examiner rejected Claims 4-5 and 7 under 35 U.S.C. § 103(a) as being unpatentable over Peter van der Linden, and further in view of Blandy et al. (US Patent No. 6,654,778). The Examiner stated in pertinent part that Linden discloses retrieving a string representation associated with a Java object, thereby allowing said string representation to be determined. Applicant respectfully notes that Linden neither discloses nor suggests using a Java Bytecode instruction for retrieving a string representation associated with a Java object, thereby allowing said string representation to be determined without invoking a Java method. In the Office Action, The Examiner has also stated that "Blandy discloses a Java bytecode instruction suitable for execution by a Java virtual machine in a Java computing environment that operates to have the functions performed by a

Java method without invoking said Java method. Applicant respectfully submits that Blandy discloses that an “interpreter is directed by the Bytecode to execute native code to perform the function indicated by the Bytecode” (Blandy, col. 5, lines 65-67), and further states that “methods having eight or fewer Bytecodes are considered potential trivial methods that may be replaced with native code, which performs the function of the method” (Blandy, col. 6, lines 42-45). In other words, Blandy replaces methods with native code. It is respectfully submitted, however, that Blandy neither discloses nor suggests a Bytecode instruction that can retrieve a string representation associated with a Java object.

The Examiner rejected Claims 6 and 8-19 under 35 U.S.C. § 103(a) as being unpatentable over Linden and Blandy as applied to Claims 1,3,4,5 and/or 7, and further in view of O’Connor et al. (US Patent No 6,026,485). The Examiner stated in pertinent part that it would have been obvious to retrieve the string representation of an object as taught by Linden without invoking a Java method in Java Virtual Machine as taught by Blandy through the conventional use of a Java Virtual Machine as taught by O’Connor. The motivation for doing so would have been because the Java virtual machine is a stack-oriented abstract computing machine, where instructions operate on data at the top of an operand stack and it is of conventional practice to use the Java Virtual Machine in this way as suggested by O’Connor. Applicant respectfully notes that as mentioned in above, Linden and Blandy neither disclose nor suggest using a Java Bytecode instruction for retrieving a string representation associated with a Java object, thereby allowing said string representation to be determined without invoking a Java method. In this regard, it is respectfully submitted that viewing the Java Virtual Machine as an abstract stack-oriented machine does not render the invention as claimed in Claims 6 and 8-19 obvious over the cited art. Similarly, it is respectfully submitted that O’Connor’s teaching of a Java Aload instruction (as pointed out by the Examiner) for loading references does

not render the invention as claimed in the pending Claims obvious over the cited art because an Aload does not teach or even remotely suggest retrieve a string representation associated with a Java object. Rather, the Aload operation loads a reference on the stack.

Applicant believes that all pending claims are allowable and respectfully requests a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the number listed below.

Respectfully submitted,

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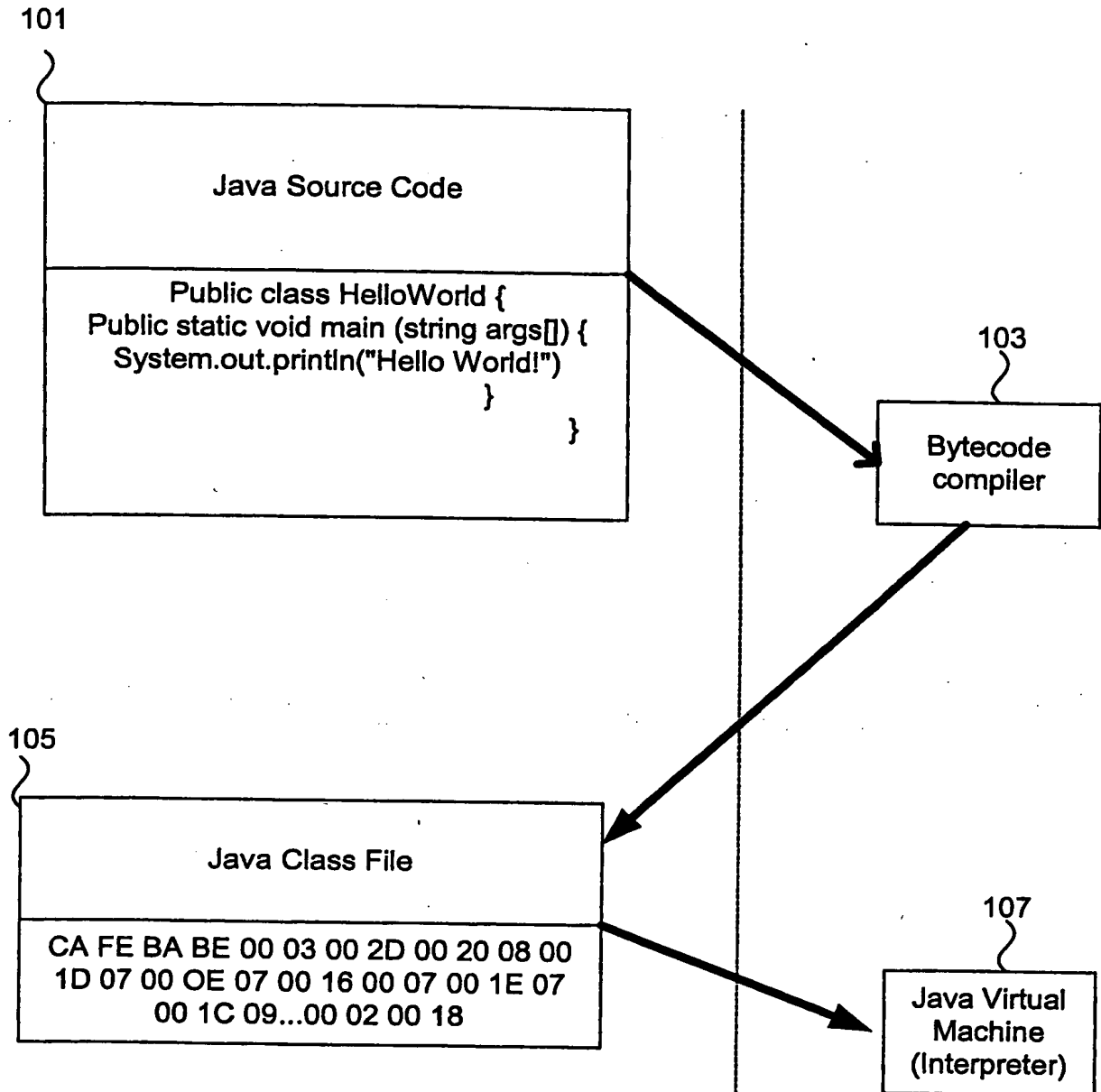


Fig. 1A

Prior Art

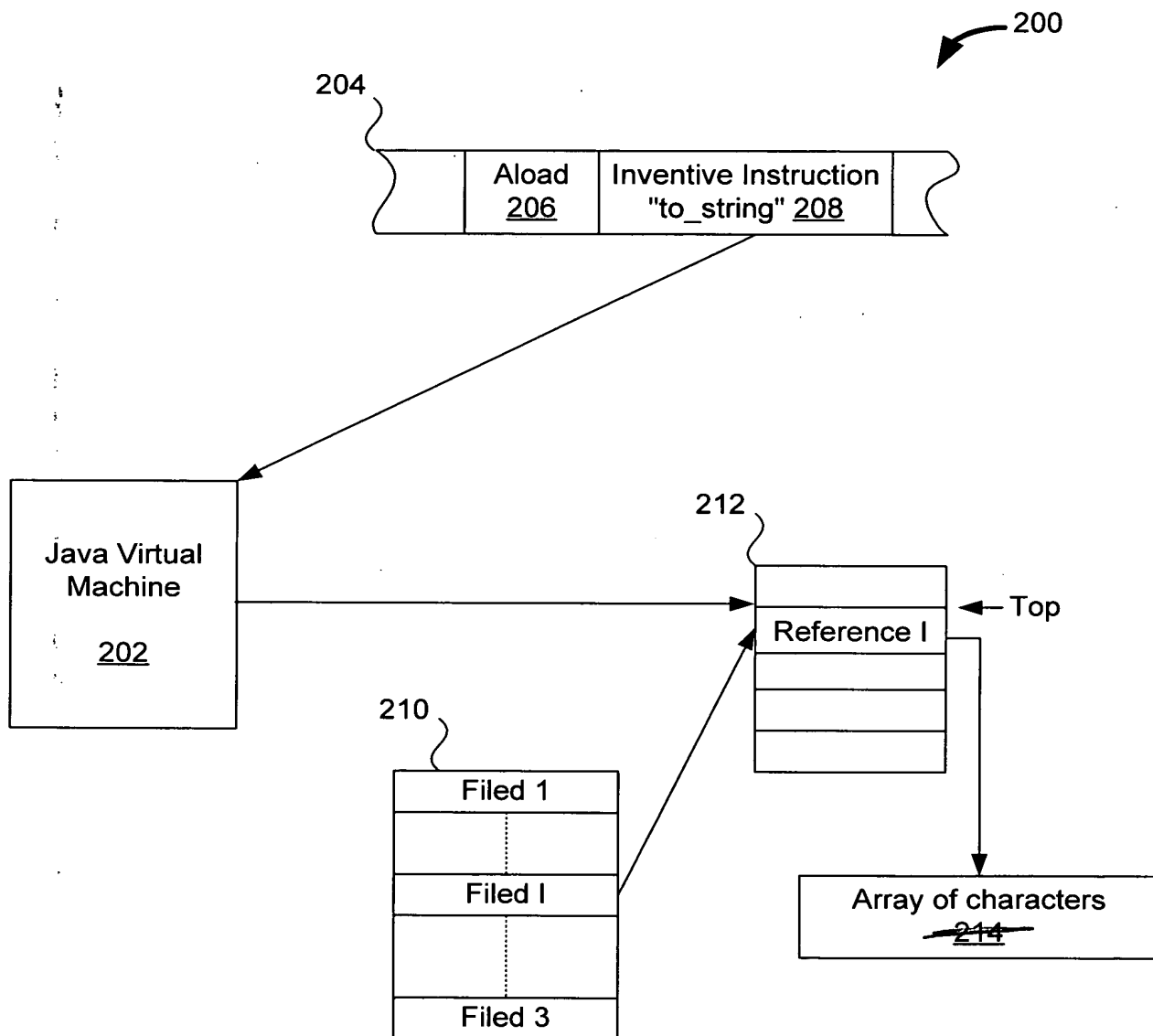


Fig. 2B

Amendments to the Drawings:

The attached sheets of proposed drawings include changes to Figures 1A and 2B.
These sheets replace the original sheets of Figures 1A and 2B.

Attachment: Replacement Sheets (02)

Annotated Sheets Showing Changes (02)